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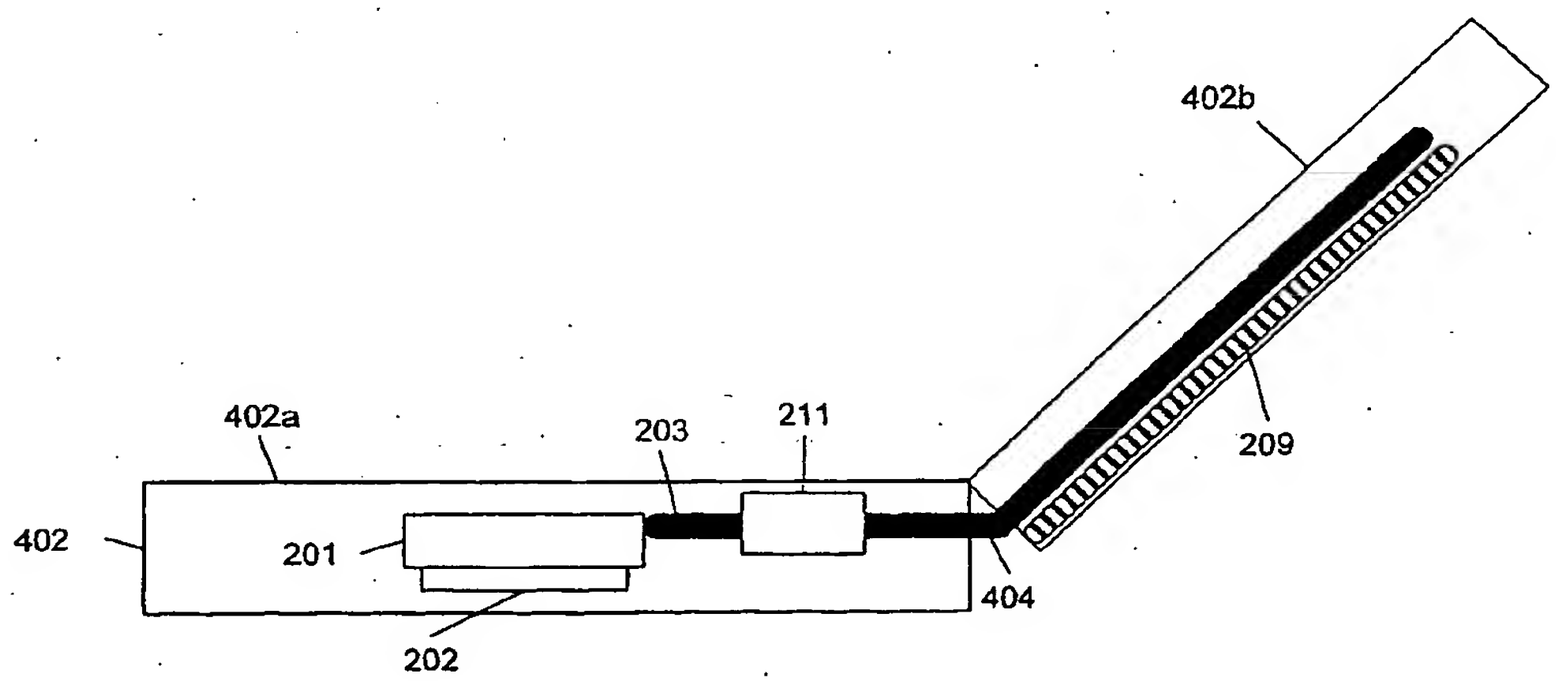
(54) Title: COOLING OF HIGH POWER DENSITY DEVICES USING ELECTRICALLY CONDUCTING FLUIDS



(57) Abstract: A system to extract heat from a high power density device and dissipate heat at a convenient distance. The system circulates liquid metal in a closed conduit using one or more electromagnetic pumps for carrying away the heat from high power density device and rejecting the heat at a heat sink located at a distance. The system may make use of a thermoelectric generator to power the electromagnetic pumps by utilizing the temperature difference between the inlet and outlet pipes of the heat sink. The system also provides networks of primary and secondary closed conduits having series and parallel arrangements of electromagnetic pumps for dissipating heat from multiple devices at a remotely located heat sink.

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